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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,703	09/15/2003	Zhidan Cheng	200-10900 (PB030016AF)	1029
56929 7590 07/06/2007 LAW OFFICES OF MARK C. PICKERING P.O. BOX 300 PETALUMA, CA 94953			EXAMINER WILSON, ROBERT W	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 07/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/662,703

Applicant(s)

CHENG ET AL.

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/15/03</u> . | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-6 & 11-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 4-5 & 11, what is meant by "each line card".

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockridge (U.S. Patent Pub. No.: US2003/0101244) in view of Ma (U.S. Patent No.: 6,798,743)

Referring to claim 1, Lockridge teaches: a device (Fig 1) comprising:

A bus (120 per Fig 2)

A first line card connection to the bus (LAN interface per Fig 1 or first line card which is connected via connection 120 per Fig 3 or bus), each first line card (LAN interface per Fig 1) having a plurality of local ports (LAN Interface has a plurality of local ports per Fig 1), each local port being connectable to a local segment that is connected to a customer device that has an IP address (LAN interface is connected via local ports to Client Device or customer device per Fig 1) Client device has a source address per Pg 3 Para [0025])

A second line card (combination of 122 and 124 per Fig 1) connected to the bus (120 connection per Fig 3), the second line card having a network port (215 per Fig 2) that is connectable to a

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network segment (124 per Fig 2) the network port having an IP address and subnet mask, the subnet mask including a range that is sufficient to provide a predetermined number of IP addresses (The combination of 122 & 124 per Fig 1 have the IP address and subnet mask assigned to the Client Device on the LAN per Pg 2 Para [0022]. A subnet mask inherently is defined to support a predetermined range of IP addresses)

Lockridge does not expressly call for: plurality of first line cards.

Ma teaches: plurality of first line cards (68 per Fig 4 or plurality of line cards per col. 8 lines 6 to 48)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the plurality of first line cards of Ma in place of the single line card of Lockridge in order to build a system which will scale to support many input ports.

In Addition Lockridge teaches:

Regarding claim 2, wherein none of the local ports has an IP address (None of the port on the LAN have an IP address per Pg 2 Para [0022])

Regarding claim 3, wherein the second line card receives messaged from the network segment the second line card forwards the message that match the IP address and subnet mask of the second line card to the first line card. (The combination of 122 and 124 per Fig 1 or second line card inherently will process messages from the Network side by comparing the destination IP address received IP address and subnet mask associated with the customer and forward the message to the LAN interface or second line card per Pg 2 Para[0022])

Regarding claim 4, wherein each line card maintains a table that indicates each of the IP address that are associated with each port of each line card (Each "line card" is indefinite but in order to perform an examination on the merits of the case the examiner assumed that the table is in the second line interface per Pg Para [0029])

Regarding claim 5, wherein when a first line card is connected to a customer device with a device IP address, the first line card identifies message on the bus that are directed to the device IP address and forward the message to the local port that is associated with the device IP address (The LAN interface per Fig 1 or first line card is connected to the Client Device or customer device which has an IP address (SA address per Pg 3 Para[0025]) the first line card identifies message on the bus that are directed to the device IP address and forward the message to the local port that is associated with the device IP address (The LAN interface per Fig receives message on 120 per Fig 2 or LAN interface which are associated with the destination address of the client device and forward the message to the local LAN port associated with the client device or customer device)

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Regarding claim 6, wherein when a first line card is connected to a customer device with a device IP address the first line card receives message form the customer device and forward the message to the second line card via the bus (The LAN interface per Fig 1 is connected a client device (Customer device) and the LAN interface card or first line card receives message form the Client device (customer device) forward the message to the combination of 122 & 12 per Fig 1 or second line card per Fig 1 via bus (120 per Fig 2)

Referring to claim 7, the combination of Lockridge and Ma teach: the device of claim 1 and Line cards

Lockeridge does not expressly call for: line card is XDSL

Ma teaches: line card is DSL per col. 8 lines 27 to 35.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the line card of XDSL of Ma in place of the LAN interface of Lockridge in order to build a system which interfaces with the DSLAM of Lockeridge which is 130 per Fig 1

5. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lockridge

(U.S. Patent Pub. No.: US2003/0101244) in view J. Mogul, "Internet Standard Subneeting Procedure" which is an IDS document of record henceforth referred to as Standard

Referring to claim 8, Lockridge teaches: the method comprising the steps of:

Determining a first line card to receive a received message based on the customer IP address (The combination of 124 and 122 per Fig 1 assume the IP address and subnet mask of the client device and upon receipt of a message inherently will determine the LAN card or first line card to receive the message based upon customer IP address)

Forwarding the received message to the first line card via the bus (The combination of 124 and 122 per Fig 1 forward message received to the LAN interface per Fig 1 or first line card via the connection 120 per Fig 2 or bus)

Lockridge does not expressly call for: receiving message that have central office IP address and a subnet mask, the central office IP address and subnet mask having the customer IP address

The Standard teaches: receiving message that have central office IP address and a subnet mask, the central office IP address and subnet mask having the customer IP address (Host requests an IP address and subnet mask from a Server or central office and receives a IP address and Mask address Reply Message per Para 2.3 Pg 8 -Pg 18)

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It would have been obvious to one of ordinary skill in the art at the time of the invention to add the receiving the message of the Internet Standard to the system of Lockridge in order to build a system which is standards compliant that will interoperate with legacy standards based systems.

In addition Lockridge teaches:

Regarding claim 9, includes a second line card (combination of 122 and 124 per Fig 1) connected to the bus (120 connection per Fig 3), the second line card having a network port (215 per Fig 2) that is connectable to a network segment (124 per Fig 2) the network port having an IP address and subnet mask, (The combination of 122 & 124 per Fig 1 have the IP address and subnet mask assigned to the Client Device on the LAN per Pg 2 Para [0022])

Regarding claim 10, wherein none of the local ports has an IP address (None of the port on the LAN have an IP address per Pg 2 Para [0022])

Regarding claim 11, wherein each line card maintains a table that indicates each of the IP address that are associated with each port of each line card (Each "line card" is indefinite but in order to perform an examination on the merits of the case the examiner assumed that the table is in the second line interface per Pg Para [0029])

Regarding claim 12, wherein when a first line card is connected to a customer device with a device IP address, the first line card identifies message on the bus that are directed to the device IP address and forward the message to the local port that is associated with the device IP address (The LAN interface per Fig 1 or first line card is connected to the Client Device or customer device which has an IP address (SA address per Pg 3 Para[0025]) the first line card identifies message on the bus that are directed to the device IP address and forward the message to the local port that is associated with the device IP address (The LAN interface per Fig receives message on 120 per Fig 2 or LAN interface which are associated with the destination address of the client device and forward the message to the local LAN port associated with the client device or customer device)

### *Conclusion*

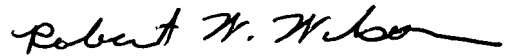
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. VU can be reached on 571/272-73155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert W Wilson  
Examiner  
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RWW  
6/11/07